**AMENDMENTS TO THE SPECIFICATION:**

Please replace the paragraph beginning on page 10, line 14, with the following rewritten paragraph:

Referring to Fig. 15, a borescope/endoscope system 40 according to an embodiment of the invention is shown. A detachable distal tip 42 contains optical system 44. Imager 12 is included in a probe 46. An optical data set 70 describing optical system 44 is generated using either factory calibration 72, field calibration 74, or a fixed calibration table 76. It should be noted that this generated optical data set can further include, for example, color balancing. In addition, the optical characteristics data set can be adjusted so that the probe is operable in a medium, for example, having an index of retraction other than air. Optical data set 70 is preferably stored in non-volatile memory in probe electronics 48 and passed to a CPU 56 for use in stereo measurement. This approach allows probe 46 to be used with different processor boxes without requiring a manual transfer of optical data set 70. Probe electronics 48 also convert the signals from imager 12 to a format accepted by a video decoder 55. Video decoder 55 produces a digitized version of the stereo image produced by probe electronics 48. A video processor 50 stores the digitized stereo image in a video memory 52, while giving CPU 56 access to the digitized stereo image. CPU 56, which preferably uses both a non-volatile memory 60 and a program memory 58, performs the global alignment, point matching, and measurement using the digitized stereo image and optical data set 70. A keypad 62, a joystick 64, and a computer I/O interface 66 preferably convey user input for such functions as cursor movement to CPU 56. Video Processor 50 superimposes graphics such as cursors and results on the digitized image as instructed by CPU 56. An encoder 54 converts the digitized image and superimposed graphics into a video format compatible with monitor 20 on which left image 21, right image 22, and superimposed graphics are displayed.

Please replace the paragraph beginning on page 16, line 3, with the following rewritten paragraph:

Referring to Fig. 21, a functional connection of the parts of an embodiment of the stereo borescope/endoscope system is shown. A stereo optical system 202, optionally implemented in a detachable tip, is combined with a probe 204. A measurement means 206 receives stereo images from probe 204 and begins the measurement process. The measurement means preferably uses a matching means 208 to match points on the left and right stereo images. The matching is done either manually (210), automatically (212), or with a combination of manual and automatic techniques. The measurement means also preferably uses an optical data set 214 which is generated by factory calibration 216, field calibration ~~18~~ 218, or a calibration table 220. Measurement means 206 then produces outputs 222 which preferably includes a measurement result, 3-D data about the object, and information concerning the accuracy of the measurements.